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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,137	02/26/2004	Pil-Sik Hyun	253/053	3498

27849 7590 02/16/2007
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EXAMINER	
LEE, HWA S	
ART UNIT	PAPER NUMBER
2886	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/786,137	HYUN ET AL.	
	Examiner	Art Unit	
	Andrew Hwa S. Lee	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-8,10-16 and 18-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-8,10-16 and 18-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-8, 25-28, and 33-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Merely classifying, identifying determining devising evaluating etc. is not sufficient to constitute a tangible result, since the outcome of the method steps has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application is realized. See OG Notices: 22 November 2005, "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility".

Please note:

> Part b. Practical Application the Produces a Useful, Concrete, and Tangible Result under Section IV Determine Whether the Claimed Invention Complies with the Subject Matter Eligibility Requirement of 35 U.S.C. Sec. 101, sentence 3, in the OG Notice from 22 November 2005 states 'In determining whether the claim is for a "practical application," the focus is <u>not on whether the steps taken to achieve a particular result</u> are useful, tangible, and concrete, but rather that the <u>final result</u> achieved by the claimed invention is "useful, tangible, and concrete."'.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4, 6-8, 10-16, and 18-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leslie et al (US 6,888,627).

Leslie et al ("Leslie" hereinafter) show an optical scanning system for surface inspection comprising:

irradiating first and second lights having different wavelengths (e.g. 1601, 1603) onto the object to create an inspection spot on the object;

collecting scattered lights (e.g. 1602, 1604) generated by the irradiated lights scattering from the inspection spot; and

Leslie does not expressly state that the defects are classified, but Leslie does show that the goal of the invention is to improve upon the prior art and Leslie discloses that the prior art classified defects (column 1, line 32 to column 2, line 20) of the object by type of defect by analyzing the scattered lights. Therefore, it would be obvious that the apparatus of Leslie classifies the defect.

With regards to claims 2-4, 11, 20-22, 28, 32, and 35, please see for instance the polarizers (e.g. 2902, 2903, etc).

With regards to claim 6, see for instance figure 22.

With regards to claims 7, 8, 10, 34, 36, and 37, see for instance figure 29. One of ordinary skill in the art would recognize that the figures shown by Leslie are only schematic or simplified drawings so the skilled artisan would know that other optical elements may not be shown. Also well know is the use of additional mirrors in order to direct light in the desired location or to circumvent around objects. See for example Figure 10 of US 6,411,377.

With regards to claim 13, Official Notice is given that it is well known to produce two different wavelengths from a single light source, and at the time of the invention, one of ordinary skill in the art would have used a single light source to produce two different wavelengths in order to reduce the cost and simplify the apparatus.

With regards to claims 14, 15, 23, 24, 26, 27, 30, 31, Leslie teaches the angle can be anywhere between 0 and 90 degrees.

With regards to claims 16 and18, Official Notice is given that having a library or lookup table to compare the measured characteristic (scattered light) to previously known (sample) values is well known.

Response to Arguments

6. Applicant's arguments filed 11/21/06 have been fully considered but they are not persuasive.

7. With regards to Applicant's argument that identifying types of defects is directed toward a statutory subject matter is not persuasive.

The claims are directed to a judicial exception, an abstract idea; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106)), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and

concrete, a tangible result is not claimed. Merely identifying is not sufficient to constitute a tangible result, since the outcome of the identifying step has not been used in a disclosed practical application nor made available in such a manner (e.g. displayed or stored on a computer readable medium) that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

8. In response to Applicant's argument that the Examiner has not offered a suggestion or a motivation to combine Leslie with the prior art discussed by Leslie, the Examiner was not attempting to combine Leslie with the discussed prior art. Rather, the Examiner was stating that Leslie already performs the function of classifying the defects. Furthermore, the abstract states, "...the output of the detectors can be compared to identify and classify the defects." and in column 15, lines 18+, states, "...affords the added advantage of classifying the types of anomaly and identifying its size and position."

9. With regards to the claimed capability to perform a function within a certain time period, it has been held that a recitation that an element is "capable of" performing a function is not a positive limitation and thus does not constitute a limitation in any patentable sense. Furthermore, the apparatus is capable of performing the function within 3 minutes if the sample is very small, with very few, if any, defects to classify, and a very fast computer processor is used.

Conclusion

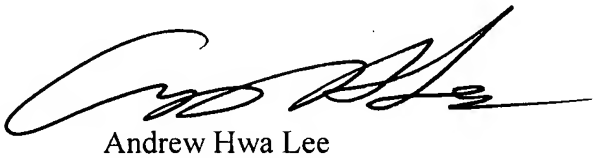
10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Andrew Hwa Lee
Primary Examiner
Art Unit 2877